

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Wagner, et al.

Application No.: 10/080,147

Filed: 02/19/2002

Title: INTERMEDIATE TRANSFER  
RECORDING MEDIUM

Attorney Docket No 321.045/US

Group Art Unit: 1774

Examiner: Bruce H. Hess

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

RESPONSE TO OFFICE ACTION DATED SEPTEMBER 16, 2003

Dear Sir:

1. (canceled)
2. (canceled)
3. (canceled)
4. (canceled)
5. (canceled)
6. (canceled)
7. (canceled)
8. (canceled)

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9. (canceled)
10. (canceled)
11. (canceled)
12. (canceled)
13. (canceled)
14. (canceled)
15. (canceled)
16. (newly added) An intermediate transfer media produced by a process comprising the steps of coating a substrate with at least one compound having at least one functional group capable of reacting with active hydrogen, coating said substrate with at least one compound having at least one functional group comprising active hydrogen, and subsequently printing an image upon said intermediate transfer media.
17. (newly added) An intermediate transfer media produced by the process described in Claim 16, further comprising the step of applying a blocking agent to said substrate, wherein said blocking agent prevents a reaction between said at least one compound having at least one functional group capable of reacting

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with active hydrogen and at least one compound having at least one functional group comprising active hydrogen, and wherein a property of said blocking agent of preventing a reaction between said at least one compound having at least one functional group capable of reacting with active hydrogen and at least one compound having at least one functional group comprising active hydrogen is removed by the application of energy to said blocking agent.

18. (newly added) An intermediate transfer media produced by the process described in Claim 17, wherein said image is transferable from said intermediate transfer media to a second substrate upon the application of energy to said blocking agent.
19. (newly added) An intermediate transfer media produced by the process described in Claim 17, wherein said energy is heat energy.
20. (newly added) An intermediate transfer media produced by the process described in Claim 16, wherein said at least one compound having at least one functional group which reacts with active hydrogen is an isocyanate.

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21. (newly added) An intermediate transfer media produced by the process described in Claim 16, wherein said at least one compound having at least one functional group comprising active hydrogen is a polyol.
22. (newly added) An intermediate transfer media produced by the process described in Claim 16, wherein said at least one compound having at least one functional group which reacts with active hydrogen is an isocyanate.
23. (newly added) An intermediate transfer media produced by the process described in Claim 16, wherein said at least one compound having at least one functional group which reacts with active hydrogen is an epoxide.
24. (newly added) An intermediate transfer media produced by the process described in Claim 16, wherein said at least one compound having at least one functional group comprising active hydrogen is converted from an anhydride.
25. (newly added) An intermediate transfer media produced by the process described in Claim 16, further the step of applying a material that undergoes an exothermic reaction upon application of energy to said substrate.

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26. (newly added) An intermediate transfer media produced by the process described in Claim 16, wherein said substrate comprises a thermally expandable material.
27. (newly added) An intermediate transfer media produced by a process comprising the steps of:
- applying a first layer to a substrate, said first layer comprising at least one compound having at least one functional group capable of reacting with active hydrogen;
  - applying a second layer to said substrate, said second layer comprising at least one compound having at least one functional group comprising active hydrogen.
28. (newly added) An intermediate transfer media produced by the process described in Claim 27, further comprising the step of subsequently printing an image on the intermediate transfer media produced by the process described in Claim 27.

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29. (newly added) An intermediate transfer media produced by the process described in Claim 27, further comprising the step of applying a blocking agent to said substrate, wherein said blocking agent prevents a reaction between said at least one compound having at least one functional group capable of reacting with active hydrogen and at least one compound having at least one functional group comprising active hydrogen, and wherein the property of said blocking agent of preventing a reaction between said at least one compound having at least one functional group capable of reacting with active hydrogen and at least one compound having at least one functional group comprising active hydrogen is removed by the application of energy to said blocking agent.
30. (newly added) An intermediate transfer media produced by the process described in Claim 27, wherein said second layer comprises at least one compound having at least one functional group comprising at least one active hydrogen further comprises a material which undergoes an exothermic reaction upon application of heat.

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31. (newly added) An intermediate transfer media produced by the process described in Claim 27, wherein said first layer comprises at least one compound comprising at least one functional group capable of reacting with active hydrogen further comprises a material which undergoes an exothermic reaction upon application of heat.
32. (newly added) An intermediate transfer media produced by the process described in Claim 27, wherein said second layer comprising at least one compound having at least one functional group comprising at least one active hydrogen further comprises a thermally expandable material.
33. (newly added) An intermediate transfer media produced by the process described in Claim 27, wherein said first layer comprising at least one compound comprising at least one functional group capable of reacting with active hydrogen further comprises a thermally expandable material.

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### REMARKS

Claims 1-8, 10 and 13 stand rejected under the judicially created doctrine of obviousness-type double patenting rejection. The Official Action recites claims 2 and 9-13 U.S. Patent No. 6,103,041 and Claims 2, 5 and 6 of U.S. Patent No. 6,105,502 in support of this rejection.

Claims 1-8, 10 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the patented Thompson et al. (International Publication WO 99/569,948 which is International Application No. PCT/US99/09387)

Claims 1-15 are canceled hereby. Claims 16-33 are added by way of amendment.

Claim 16 defines an intermediate transfer media produced by a process comprising the steps of coating a substrate with at least one compound having at least one functional group capable of reacting with active hydrogen, coating the substrate with at least one compound having at least one functional group comprising active hydrogen, and subsequently printing an image upon the intermediate transfer media. The *Thompson et al.* process teaches a ribbon substrate comprising at least one compound having at least one functional group capable of reacting with active hydrogen and at least one compound having at least one functional group comprising active hydrogen. The ribbon substrate, which is typically a polyester ribbon, is provided as an



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ink source to a digital thermal printer. The reactive components are printed from the polyester ribbon to an intermediate substrate, or to a final substrate, by the printer.

The *Thompson et al.* reference does not teach or suggest printing an image upon the printer ribbon substrate, as required by Claim 16. Stated otherwise, *Thompson et al.* teaches a donor substrate, and not a receiver substrate, as required by the present invention. It would not be obvious to one skilled in the art to print an image on the donor substrate of *Thompson et al.* to arrive at the present invention.

The Claims U.S. Patent 6,103,041 or 6,105,502 as cited by the Official Action do not teach or suggest coating a substrate with at least one compound having at least one functional group reacting with active hydrogen and coating said substrate having at least one compound having at least one functional group comprising of active hydrogen and subsequently printing an image upon the substrate. These patents also teach a donor substrate having reactive materials.

Claims 17-26 are presented for the first time, and depend from Claim 16. These Claims are allowable, *inter alia*, as depending from allowable Claim 16.

Newly added independent Claim 27 corresponds generally to Claim 9, now cancelled. Claim 9 was indicated in the Official Action to be allowable if rewritten in independent form.

Newly added dependent Claims 28-33 are allowable, *inter alia*, as depending

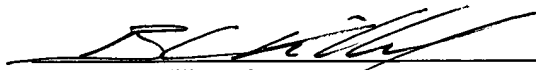
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from Claim 28.

It is respectfully submitted that Claims 16-33 are in condition for allowance.  
Review and allowance at the earliest possible date is requested.

Respectfully submitted,



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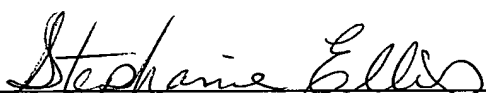


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**CERTIFICATE OF MAILING**

I hereby certify that this Response to Office Action dated September 16, 2003, and Post Card are being deposited with the United States Postal Service, with sufficient postage attached thereto, in an envelope addressed to: Mail Stop Petition, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 11th day of November, 2004.

  
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